USGS Data Report Coverage

Thursday, September 27, 2012

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WALL STREET JOURNAL: EPA Says Wyoming Fracking Results Are Consistent

Wall Street Journal

Tennille Tracy

09/26/12

http://online.wsj.com/article/SB10000872396390443328404578020923049282436.html

The Environmental Protection Agency said new government tests of groundwater near Pavillion, Wyo., have yielded results similar to data it released last year, when it suggested chemicals in the water were linked to hydraulic fracturing.

The EPA's contention was dismissed by Encana Corp., ECA.T +0.14% the natural-gas company operating in the area, which said the EPA was still offering a "flawed" interpretation of test results.

The new findings were released Wednesday by the U.S. Geological Survey, which tested water from one of two monitoring wells the EPA drilled after Pavillion residents started to voice concern years ago about the smell and taste of their water. The agency dug the two wells, both hundreds of feet deep, to test the area for signs of contamination.

Encana and natural-gas industry supporters said the wells were drilled into a natural-gas reservoir, which was why the agency found components of natural gas.

Wednesday's findings come after the EPA issued a draft report last December, saying it found chemicals in both wells that appeared to come from hydraulic fracturing, or fracking, the drilling technique credited with helping spur a boom in U.S. natural-gas production. Critics accused the EPA of jumping to conclusions before seeking the input of outside experts.

The EPA has said it would review comments and concerns before releasing a final report.

The EPA agreed to retest the Pavillion wells earlier this year. The agency hasn't yet completed its analysis of Pavillion's water and outside experts say it is too early to draw definitive conclusions from either the USGS data or the agency's draft report. The USGS presented its findings as raw data, leaving it to EPA and others to interpret them.

The EPA said USGS results are "generally consistent" with its data.

The USGS said it declined to test the water in one of the two EPA monitoring wells because the volume of water flow wasn't high enough to get good readings—relying on the other well for the tests.

"This goes to the heart of concerns raised by state and federal agencies, as well as Encana: EPA's wells are improperly constructed," Encana spokesman Doug Hock said.

Fracking opponents say the procedure poses a risk to the country's drinking-water supplies and should be regulated more strictly, if not stopped altogether. The natural-gas industry says fracking is safe as long as drilling is done correctly.

The EPA has repeatedly stressed that conditions in Pavillion are different from many other areas of the country because the fracking took place in and below the drinking-water aquifer and in proximity to wells that provide drinking water. President Barack Obama has voiced strong support for natural-gas production and says the industry can create jobs.

With a population of about 230 people, Pavillion has become an epicenter in a broader debate over fracking, in which energy companies pump a high-pressure mix of water, sand and chemicals into the ground to break open seams in the earth and unlock natural gas trapped inside.

ENERGY WIRE: EPA, driller differ on new Pavillion water test results

Energy Wire/E&E (Subscription)

Mike Soraghan

9/27/12

U.S. EPA says a second round of test results released yesterday by the U.S. Geological Survey supports its preliminary finding that hydraulic fracturing contaminated groundwater in Pavillion, Wyo.

But the major driller in the Pavillion area says USGS's decision to sample only one of the two wells upon which EPA based its conclusions shows serious flaws in EPA's handling of the case.

Encana Corp.'s Doug Hock leapt on the inconsistency, saying it validates the company's concern that EPA's monitoring wells were improperly constructed.

"The report seems to indicate that USGS declined to sample MW02 because the well could not provide a sample that was representative of actual water quality conditions," Hock said in a statement.

EPA chart

Organic compounds detected in deep monitoring wells MW01 and MW02 during Phase III and IV sampling events. Horizontal bars show method reporting limits for the individual analytes. Chart courtesy of U.S. EPA.

USGS offered no analysis to resolve the different accounts. In releasing two reports yesterday, the agency pointedly stayed out of the bitter battle of words and science taking place in the small community of Pavillion. The agency said its agreement with the state of Wyoming called for it to release the data without analysis.

"While USGS did not interpret the data as part of this sampling effort, the raw data results are adding to the body of knowledge to support informed decisions," said David Mott, director of the USGS Wyoming Water Science Center.

USGS said the data will also be made available to a peer-review panel tasked with looking at the broader EPA study.

USGS released two reports from the new round of testing. One documentdetailed its study plan. The other document gave the results of an extra round of testing.

At stake is the reputation of gas drilling and hydraulic fracturing, or "fracking."

Some Pavillion-area residents say they began to suspect water contamination in 2005, around the time that hydraulic fracturing and other activity picked up in the area, where drilling has taken place for decades. But they said state officials ignored their concerns. EPA, though, began an investigation under its Superfund authority.

When EPA announced last year it had found frack fluid in groundwater in the Pavillion area, it punctured the industry talking point that there has never been a documented case of groundwater contamination from fracking. Still, the agency did not find fracking chemicals in the groundwater that area residents use for drinking.

Nevertheless, EPA's finding on frack fluids came under furious assault from Wyoming officials, congressional Republicans and the oil and gas industry. One Wyoming oil and gas official said earlier this year that the residents who have complained about their water are motivated by "greed." Within weeks, he was forced to resign by Gov. Matt Mead (R) (EnergyWire, June 15).

Amid the barrage of criticism, EPA agreed to the further testing. USGS said the results released yesterday were from testing requested by state officials.

EPA's finding regarding fracking chemicals relied on results from just two monitoring wells that it paid to have drilled in the area. EPA officials said they did not have enough money to drill more. In the December report, they are referred to as MW01 and MW02. The deeper of the two wells was MW02, and it showed more signs of contamination.

It was MW02 where concentrations of benzene were 49 times EPA's maximum contaminant level

But USGS said it found problems with MW02 that caused it not to have confidence in the findings. Water entered the well, USGS reported, at an "exceedingly low" flow rate. USGS said

it tried procedures that would account for that, but in the end it could not get data from the well that would meet its standards.

"The initial intention of the USGS to sample well MW02 using purge procedures that would be as consistent as possible with the standard USGS approaches implemented at well MW01 could not be carried out," the report states.

More federal criticism

The drilling of the well has also been criticized by another federal agency, the Bureau of Land Management. In a newly surfaced document, BLM State Director Don Simpson criticized EPA's testing procedures in Pavillion as insufficient and called its findings "premature."

"The suggestion that hydraulic fracturing is the explanation for the presence of certain analytes detected in groundwater samples is premature," Simpson said. "We recommend a larger and much more robust study effort and investment prior to drawing any conclusions, particularly in the case about the role of hydraulic fracturing use in development of the oil and gas resource."

The letter, submitted as part of EPA's formal comment period, is dated March 1, but it was not formally posted to the record until July. It was not widely noted until it was highlighted by industry sources yesterday.

The EPA report cited a host of other drilling problems in the area, such as unlined pits that leaked benzene into shallow groundwater and numerous wells that drillers failed to seal off from drinking water by encasing them in concrete.

But attention focused on whether the Pavillion case debunked the oil and gas industry's claim that there had never been a documented case of groundwater contamination from the specific process of hydraulic fracturing.

Despite the problems USGS encountered, EPA officials said the results are "generally consistent" with the preliminary study it released in December.

"Data released by the United States Geological Survey (USGS) is generally consistent with ground water monitoring data previously released by the Environmental Protection Agency (EPA) for the Pavillion, Wyo. area," EPA said in a statement released after the USGS announcement."That data was released for public comment and review, and the important feedback received from these steps will help inform the final analysis. Once finalized, the latest EPA data, along with the USGS data, will be submitted to an independent, expert peer review as part of the ongoing scientific process later this year."

Click here to read the USGS study plan.

Click here to read the USGS results.

Click here to read EPA's December report.

COUNTY 10: USGS Data Report on East Pavillion water wells released Wednesday; Gov. Mead waits on analysis of results

County 10 News

09/27/12

http://county10.com/2012/09/27/usgs-data-report-on-east-pavillion-water-wells-released-wednesday-gov-mead-waits-on-analysis-of-results/

(Cheyenne, Wyo.) – The U.S. Geological Survey is making available two reports related to groundwater-quality, quality-control, and well yield data for two monitoring wells east of Pavillion, Wyo. The first USGS report describes the sampling and analysis plan that was developed to collect groundwater data. A second report provides the raw data and information from the groundwater-quality samples.

The samples were taken as part of a collaboration between the State of Wyoming, the U.S.G.S., the U.S. Environmental Protection Agency and the Wyoming Tribes. The following is Governor

Mead's statement:

"I have said that we will be guided by science in the way we react to the investigation of impacts on water outside of Pavillion," he said. "The collaborative effort used to gather this data allowed Wyoming experts to have a say about sampling methodology and testing procedures. I feel that the process used to acquire this data was an improvement on the process used for the draft EPA report last December."

"I thank our partners for working together with Wyoming. We are now waiting as analysis of this data is done. It should help inform the peer review process," the governor said.

USGS conducted the sampling at the request of the State of Wyoming and in coordination with the U.S. Environmental Protection Agency. Consistent with a cooperative agreement with Wyoming, the USGS did not interpret data as part of this sampling effort. Results are being provided to the Wyoming Department of Environmental Quality, EPA and the public. The USGS data, along with data that EPA has collected, will also be available to the peer review panel tasked with looking at the broader EPA study.

"Today's USGS reports are intended to provide additional scientific information to decision makers and all interested parties on the composition of the groundwater represented in the aquifer underlying the (East) Pavillion area," said David Mott, Director of the USGS Wyoming Water Science Center. "While USGS did not interpret the data as part of this sampling effort, the raw data results are adding to the body of knowledge to support informed decisions."

In June 2010, EPA installed two deep monitoring wells (MW01 and MW02) East of Pavillion to study groundwater quality. During April 2012, USGS, through a cooperative agreement with the Wyoming Department of Environmental Quality, collected groundwater-quality data and quality-control data from monitoring well MW01. While well yield and quality-control data were collected from monitoring well MW02, the USGS did not collect groundwater-quality data for that well.

Groundwater-quality samples were analyzed for water-quality properties; inorganic constituents including naturally occurring radioactive compounds; organic constituents; dissolved gases; stable isotopes of methane, water and dissolved inorganic carbon; and environmental tracers.

The sampling and analysis plan was developed by the USGS in consultation with an interagency technical team which included representatives from the State of Wyoming, EPA, and the Northern Arapaho and Eastern Shoshone Tribes. It describes the sampling equipment that was used, well purging strategy, purge water disposal, sample collection and processing, field and laboratory sample analysis, equipment decontamination, and quality-assurance and quality-control procedures.

The two reports can be found at http://pubs.usgs.gov/of/2012/1197/.

REUTERS/CHICAGO TRIBUNE: Report leaves debate open on contested Wyoming fracking study

Reuters/Chicago Tribune

Ayesha Rascoe/Laura Zuckerman

09/26/12

http://www.chicagotribune.com/classified/automotive/sns-rt-us-usa-fracking-wyomingbre88p1uz-20120926,0,7576582.story

WASHINGTON (Reuters) - The government on Wednesday released the latest water quality results from a Wyoming aquifer that federal regulators said was contaminated by natural gas drilling, but the data will likely do little quiet debate on the cause of the polluted groundwater.

While the United States Geological Survey report included raw data from samples it collected from a well near Pavillion, Wyoming, in April and May, the agency did not provide any analysis, leaving the information open to varying conclusions.

"Interpretation was not part of the scope of the report," USGS spokesman Dave Ozman said.

Pavillion, Wyoming was thrust into the national spotlight late last year when the Environmental Protection Agency released a draft report finding that hydraulic fracturing fluids used in natural gas drilling likely polluted groundwater in the area.

The report contradicted arguments by gas drillers that fracking fluids have never contaminated drinking water.

Advances in hydraulic fracturing, which involves injecting water, sand and chemicals underground to extract fuel, have unlocked vast shale gas resources across the nation.

Environmental groups have called for more federal regulation of fracking and some for an outright ban, saying it pollutes the air and taints groundwater.

In response to criticism from the oil and gas industry and Wyoming officials, the EPA agreed to work with the state government and the USGS to retest the water before issuing its final analysis.

The data released by the USGS on Wednesday "is generally consistent with ground water monitoring data previously released by the Environmental Protection Agency (EPA) for the Pavillion, Wyoming area," the EPA said in statement on Wednesday.

The EPA will soon release additional data it collected from the wells. Once finalized, the information from the EPA and the USGS will be submitted to for independent peer review.

Encana Corp, a Canadian company that owns the gas field near Pavillion, said there was "nothing surprising" about the data released on Wednesday.

Doug Hock, an Encana spokesman, said the main area of dispute is the conclusions drawn from the data.

Encana, which has raised concerns about the adequacy of the EPA's monitoring of wells, pointed out that the USGS was only able to sample one of the two wells.

"This goes to the heart of concerns raised by state and federal agencies, as well as Encana - EPA's wells are improperly constructed," Hock said in a statement.

The USGS said it did not sample the second well because it was not able to apply the same method it used for the first well.

ASSOCIATED PRESS/FUEL FIX: New Wyo. tests show less benzene in fracking zone

AP/Fuel Fix

09/27/12

http://fuelfix.com/blog/2012/09/27/new-wyo-tests-show-less-benzene-in-fracking-zone/

CHEYENNE, Wyo. — New groundwater testing in Wyoming shows lower levels of the carcinogen benzene than what the U.S. Environmental Protection Agency reported when it linked contaminants in two water wells to hydraulic fracturing, but only one well was tested this time.

Benzene is a hydrocarbon commonly associated with oil and gas development. Last year's testing by the EPA showed benzene at almost 50 times the recommended EPA limit. The new data released Wednesday by the U.S. Geological Survey show benzene at 3 percent of the recommended EPA limit.

This year's tests and the previous tests aren't an apples-to-apples comparison, however. Researchers this time around decided they couldn't get enough water for a reliable sample from one of the wells the EPA drilled to test for pollution near the rural community of Pavillion.

That low-flowing well had the very high benzene level. In the other well — the one researchers relied on for this year's testing — any amount of benzene in the groundwater tested was too small to be detected last year.

In that sense, the results for benzene this year are in line with last year's.

The results from this year's testing generally are "consistent with ground water monitoring data previously released," EPA spokeswoman Alisha Johnson said by email.

Environmental groups and Encana Corp., the Calgary-based petroleum company that operates the Pavillion gas field, declined to comment on the meaning behind the data released Wednesday, saying they needed more time to analyze the material.

Wyoming Gov. Matt Mead also said the state would need more time to review the data gathered in collaboration with the USGS, Wyoming, the EPA and two American Indian tribes.

"I feel that the process used to acquire this data was an improvement on the process used for the draft EPA report last December," Mead said in a news release.

One person each representing Wyoming, the EPA and the two tribes had the opportunity to view the data in advance and agreed not to discuss any of that information, according to Mead spokesman Renny MacKay.

The USGS released tables the amounts of dozens of chemicals without offering any analysis.

Benzene is not among the chemicals the EPA pointed to last year in making the link to hydraulic fracturing, commonly known as fracking. The process involved blasting millions of gallons of water mixed with sand and chemicals down well holes to crack open formations and improve the flow of oil and gas.

Wyoming officials and the petroleum industry criticized the draft EPA study released in December, characterizing its findings as flimsy. State officials were further incensed the EPA drant consult with them about the testing it was doing on their turf.	id
Last winter, Wyoming officials and the EPA mended fences and announced they would collaborate with the USGS and tribes on the new testing, which occurred over two days in late	

Meanwhile, some Pavillion-area homeowners continue to complain about well water that became befouled by chemicals after gas drilling picked up in their neighborhood about seven years ago.

One environmentalist representing the affected residents wished for more official analysis to go with the reams of new data.

"A better interpretation of the data would have been beneficial for the impacted residents and the public," Deb Thomas, with the Powder River Basin Resource Council, said by email.

Encana spokesman Doug Hock said the fact that one of the wells didn't produce enough water to use for the new testing casts doubt on the previous testing.

"EPA's wells are improperly constructed," he said by email.

April.

Encana will comment on the results after it had more time to review them, he said.

A full peer review of the sampling and findings to date will occur later.

ASSOCIATED PRESS/MILWAUKEE JOURNAL SENTINEL: New data on

Wyo. Frack site await interpretation

AP/Milwaukee Journal Sentinel

Mead Gruver

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CHEYENNE, Wyo. (AP) The meaning of reams of new data from groundwater testing in a remote Wyoming gas field where the U.S. Environmental Protection Agency sparked concern last year will be a matter of interpretation.

Does the new science shore up damnation of hydraulic fracturing the petroleum industry practice of blasting water, sand and chemicals deep beneath the water table? Or does it refute criticism of the technique as too much anxious hand-wringing?

No one is making either claim yet.

The U.S. Geological Survey on Wednesday released tables showing the amounts of dozens of various chemicals in the groundwater below the Pavillion area of west-central Wyoming. But there was no analysis accompanying the data.

The information, from testing in late April, follows similar tests last year, when the EPA linked contaminants in two water wells to hydraulic fracturing, or fracking.

The new testing shows much lower levels of the carcinogen benzene than what the EPA reported. However, only one of the two wells was tested this time.

With no official interpretation as a guide, the pro-industry and environmental groups that

weighed in almost instantly on the sensational EPA draft report in December were conspicuously quiet this time. Even Wyoming Gov. Matt Mead who actively sought the new testing and whose own employees had a hand in it passed on saying anything about what the data actually meant.

"We will be guided by science in the way we react to the investigation of impacts on water outside of Pavillion," Mead said in a mild prepared statement.

Benzene is a hydrocarbon commonly associated with oil and gas development. Last year's EPA testing showed benzene at almost 50 times the recommended EPA limit. The new data, from tests that involved the state, the USGS, the EPA, and the Northern Arapaho and Eastern Shoshone Indian tribes, show benzene at 3 percent of the recommended EPA limit.

But researchers this time around decided they couldn't extract enough water for a reliable sample from the well that showed the highest amount of benzene last year.

In the well the researchers did use, the amount of any benzene in the groundwater was too small to be detected last year. In that sense, the results for benzene this year are in line with last year's.

The latest data is generally "consistent with groundwater monitoring data previously released," EPA spokeswoman Alisha Johnson said by email.

The EPA has said repeatedly that the findings in Pavillion, where natural gas and drilling for it occurs at a relatively shallow level, can in no way be applied to fracking that occurs in other geologic formations elsewhere.

Encana Corp., the Calgary, Alberta, company that operates the Pavillion gas field, also declined to comment on the meaning of the data. However, company spokesman Doug Hock said the fact that one of the wells didn't produce enough water for the new testing casts doubt on the previous results.

"EPA's wells are improperly constructed," he said by email.

He said Encana would comment on the results after it had more time to review them. Same with some environmentalists: The Natural Resources Defense Council looked at the data and did not comment Wednesday.

"A better interpretation of the data would have been beneficial for the impacted residents and the public," Deb Thomas, of the Powder River Basin Resource Council, said by email. The council has been representing some of the Pavillion residents who have complained about well water that became befouled by chemicals.

Benzene is not among the chemicals the EPA pointed to last year in making the link to fracking. The process of extracting oil and gas involves pumping millions of gallons of water mixed with sand and chemicals down well holes to crack open formations and improve the flow of hydrocarbons.

Pavillion-area homeowners say their water became tainted after gas drilling and fracking picked up in their neighborhood about seven years ago.

Wyoming officials and the petroleum industry criticized the draft EPA study, characterizing its findings as flimsy. State officials were further incensed the EPA did not consult with them about the testing it was doing on their turf.

Last winter, Wyoming officials and the EPA mended fences and announced they would collaborate with the USGS and the tribes on the new testing. A full peer review of the sampling and findings to date will occur later.

BLOOMBERG/BUSINESSWEEK: Diesel in Water Near Fracking Confirm EPA Tests Wyoming Disputes

Blooomberg Businessweek

Mark Drajem

09/27/12

http://www.businessweek.com/news/2012-09-26/diesel-compounds-found-in-water-near-wyoming-fracking-site

A retest of water in Pavillion, Wyoming, found evidence of many of the same gases and compounds the Environmental Protection Agency used to link contamination there to hydraulic fracturing, the first finding of that kind.

A U.S. Geological Survey report on its water testing of one monitoring well near the rural Wyoming town -- where some residents complain that gas drilling and hydraulic fracturing contaminated their drinking supplies -- identified levels of methane, ethane, diesel compounds and phenol, which the EPA had also identified in its report last year.

The latest data are "generally consistent," with the agency's finding, Alisha Johnson, an EPA spokeswoman, said in an e-mail. The USGS said it didn't interpret the results, which were given to state officials.

The driller, Encana Corp. (ECA), said it's not responsible for the pollutants in the water.

The EPA's draft report in December was the first U.S. government finding to link hydraulic fracturing, or fracking, and water contamination.

"At a quick glance, these results appear consistent with the earlier EPA study," Rob Jackson, an environmental scientist at Duke University, said in an e-mail. "The stray gas concentrations are very high, not only for methane but especially for ethane and propane. That combination suggests a fossil-fuel source for the gases."

The EPA has also retested water in Pavillion, including at homeowners' wells, and hasn't released those results. It has briefed the owners.

EPA Recommendations

"The recommendation still stands that we don't cook or drink our water," John Fenton, a farmer there, said in an interview, describing a recent conversation he had with EPA officials. The results "are running pretty much the same as they have in the past."

Encana, based in Calgary, owns 140 natural-gas wells in an area of cattle and hay farms outside of Pavillion, about 230 miles (370 kilometers) northeast of Salt Lake City. The company argued that contaminants found in water wells are naturally occurring, and the two test wells that the EPA drilled in 2010 were improperly constructed.

The U.S. geological agency only tested water from one of the two EPA wells, a decision that bolsters the company's claims about deficiencies with the monitoring wells, Doug Hock, an Encana spokesman, said in an e-mail.

'Nothing Surprising'

"From a preliminary examination of the data, there appears to be nothing surprising in these results," Hock said.

If the EPA data and a final report uphold the initial findings, Encana could be forced to address the homeowners' water complaints. The company is already making periodic water deliveries to about 20 area households.

"We are now waiting as analysis of this data is done," Wyoming Governor Matt Mead said in a statement. "It should help inform" the outside review of the EPA study, he said.

Wyoming state officials, including Mead, criticized the EPA's conclusions, and the process of preparing that 2011 report. After registering those complaints with EPA Administrator Lisa Jackson, the agency agreed to this retest of the wells, and to call in the USGS to conduct parallel tests.

The wells in Pavillion are different than those in most areas of Pennsylvania, where residents also have complained about tainted water from fracking. These Wyoming gas wells don't go as deep and the aquifer is closer to the gas-production zone.

Hydraulic fracturing, or fracking, uses millions of gallons of chemically treated water and sand to free oil and natural gas trapped in rock. The technology helped the U.S. cut dependence on imported fuels, lower power bills and cut state unemployment from Pennsylvania to North Dakota.

DENVER BUSINESS JOURNAL: Feds release new water data from Wyoming fracking area

Denver Business Journal

Cathy Proctor

09/26/12

http://www.bizjournals.com/denver/news/2012/09/26/feds-release-new-water-data-from.html

The U.S. Geological Survey on Wednesday released two reports on samples it took from two groundwater wells near Pavillion, Wyo. — an area that's been the focus of controversy over whether oil and gas operations such as hydraulic fracturing have contaminated drinking water wells.

The natural gas field near Pavillion is owned by Denver-based Encana Oil & Gas (USA) Inc.

The USGS's reports detailed how the samples were collected, and the raw data from the samples, but offered no conclusions, the agency said, per its agreement with the state of Wyoming.

The latest reports show lower levels of benzene, a carcinogen, in groundwater samples than the U.S. Environmental Protection Agency reported late last year in the area, the Associated Press reports.

But EPA spokeswoman Alisha Johnson said in an emailed statement that the USGS's data is "generally consistent" with the EPA's previously released data.

The sampling and analysis plan was developed by the USGS with help from representatives of Wyoming, the EPA, and the Northern Arapahoe and Eastern Shoshone Tribes.

"Today's USGS reports are intended to provide additional scientific information to decision makers and all interested parties on the composition of the groundwater represented in the aquifer underlying Pavillion," said David Mott, Director of the USGS Wyoming Water Science Center. "While USGS did not interpret the data as part of this sampling effort, the raw data results are adding to the body of knowledge to support informed decisions."

In December 2011, the EPA issued a draft report saying that groundwater pollution in two deep wells near Pavillion is "likely associated with gas production practices, including hydraulic fracturing."

Hydraulic fracturing, or fracking, is the controversial practice of injecting water and chemicals underground to free natural gas and oil.

Many groups, including Encana and Wyoming state officials, criticized the EPA's December report.

Wyoming asked the USGS to take more water samples from the wells, in coordination with the EPA, but not to analyze it, the USGS said in its announcement.

The water samples were collected in April, although the USGS said it was unable to collect groundwater-quality data at one of the two deep monitoring wells built by the EPA for its tests.

Wednesday, Encana said it had conducted a preliminary review of the USGS data and found nothing surprising.

"More important is the fact that USGS only sampled one of the two monitoring wells [that were the subject of the EPA's report]," Encana spokesman Doug Hock said in an email. "This goes to the heart of concerns raised by state and federal agencies, as well as Encana — the EPA's wells are improperly constructed. Specifically, the report seems to indicate that USGS declined to sample MW02 because the well could not provide a sample that was representative of actual water conditions."

Wyoming Gov. Matt Mead said in a statement thanked the USGS for collecting the information.

"I have said that we will be guided by science in the way we react to the investigation of impacts on water outside of Pavillion," Mead said in the statement. "The collaborative effort used to gather this data allowed Wyoming experts to have a say about sampling methodology and testing procedures. I feel that the process used to acquire this data was an improvement on the process used for the draft EPA report last December."

EPA's Johnson said that the new data "was released for public comment and review, and the important feedback received from these steps will help inform the final analysis. Once finalized, the latest EPA data, along with the USGS data, will be submitted to an independent, expert peer review as part of the ongoing scientific process later this year."

INNOVATION TRAIL: USGS report on water samples from Wyoming fracking field released without comment

Innovation Trail

Matthew Leonard

09/27/12

http://www.innovationtrail.org/post/usgs-report-water-samples-wyoming-fracking-field-released-without-comment

The U.S. Geological Survey (USGS) has released the results of testing it has conducted on the groundwater around a Wyoming gas field.

The samples were collected over two days in April after the The Wyoming Department of Environmental Quality (WDEQ) asked for additional sampling to be done by the USGS.

The USGS report on the sampling is in two parts; one which collates the testing data, and the other outlining the methodology, chain of custody procedures and plans for analysis.

The reports were released by the USGS without any interpretation or comment.

The USGS was brought in by the Environmental Protection Agency, the state of Wyoming and the Northern Arapaho and Eastern Shoshone tribes after testing by the EPA found a link between contaminated water at two wells and the hydraulic fracturing operation at the Pavillion gas field in Wyoming's Wind River Basin.

The EPA's draft report released in December 2011 concluded;

Detection of high concentrations of benzene xylenes, gasoline range organics, diesel range organics, and total purgeable hydrocarbons in ground water samples from shallow monitoring wells near pits indicates that pits are a source of shallow ground water contamination in the area of investigation.

That draft report was heavily criticized by the state's governor Matt Mead who was critical of the EPA's methodology and the USGS survey done in April this year is intended to address the state's concerns.

Companies such as Encana Gas and Oil also criticized the draft report citing an absence of external scrutiny.

The results of today's USGS testing will now go forward to peer review which is when the study will receive more interpretation.

Blake Androff

Deputy Director of Communications

U.S. Department of the Interior

Office: (202) 208-6416 | Cell: (202) 725-7435

From: Stevens, Clark [mailto] (6) @who.eop.gov|

Sent: Wednesday, September 26, 2012 4:53 PM

To: Alisha Johnson; Kelly, Kate P Cc: Androff, Blake J; James O'Hara

Subject: RE: Heads Up

OK.

From: Alisha Johnson [mailto:Johnson.Alisha@epamail.epa.gov]

Sent: Wednesday, September 26, 2012 4:55 PM

To: Kelly, Kate P

Cc: Androff, Blake J; Stevens, Clark; James O'Hara

Subject: Re: Heads Up

Yep, same here.

Kelly, Kate P" ---09/26/2012 04:51:00 PM---My sense is that reporters are confused and dont seem to know what to do w the raw data. From: Steve

 $\label{eq:constraints} From: "Kelly, Kate P" < \underline{Kate} $\underline{Kelly@ios.doi.gov}$ $To: "'Clark_W_Stevens@who.eop.gov'" < $\underline{Clark_W_Stevens@who.eop.gov}$, Alisha Johnson/DC/USEPA/US@EPA Cc: "Androff, Blake J" < $\underline{Plake_Androff@ios.doi.gov}$, James O'Hara/DC/USEPA/US@EPA \underline{Ce} $\underline{Plake_Androff@ios.doi.gov}$, \underline{Ce} $\underline{Ce$

Date: 09/26/2012 04:51 PM Subject: Re: Heads Up

My sense is that reporters are confused and dont seem to know what to do w the raw data.

From: Stevens, Clark [mailto (b) (6) @who.eop.gov]

Sent: Wednesday, September 26, 2012 04:32 PM

To: Kelly, Kate P; Alisha Johnson < <u>Johnson Alisha@epamail.epa.gov</u>> **Cc**: Androff, Blake J; James O'Hara < O'Hara.James@epamail.epa.gov>

Subject: RE: Heads Up

Do we have any sense what these guys are writing?

From: Kelly, Kate P [mailto:Kate Kelly@ios.doi.gov] Sent: Wednesday, September 26, 2012 4:28 PM

To: Alisha Johnson; Stevens, Clark **Cc:** Androff, Blake J; James O'Hara

Subject: RE: Heads Up

Here's who USGS has heard from:

Ayesha Rascoe, Reuters

Tong Scott, Marketplace Public Radio

Dan Frosch, NY Times

Ed McAllister, Reuters

Tenille Tracy, DowJones

Jeff Brady, NPR

Mike Soraghan, EnergyWire

Mead Gruver, AP

Willow Belden, WY Public Radio

Tripp Blatz, Bloomberg

Mark Drajem, Bloomberg

Neela Banerjee, LA Times

From: Alisha Johnson [mailto:Johnson.Alisha@epamail.epa.gov]

Sent: Wednesday, September 26, 2012 4:25 PM

To: Stevens, Clark

Cc: Androff, Blake J; James O'Hara; Kelly, Kate P

Subject: RE: Heads Up

Dan Frosch, New York Times (303) 704-9033; cell daniel.frosch@nytimes.com

AP, Mead Gruver mgruver@ap.org 307.632.9351

Bloomberg, Mark Drajem mdrajem@bloomberg.net

DowJones, Tennille Tracy tennille.tracy@dowjones.com

EnergyWire, Mike Soraghan msoraghan@eenews.net

Marketplace Public Radio, Scott Tong (sp?) 202.263.0212 stong@marketplace.org

Thomsonreuters, Ayesha Rascoe Ayesha.rascoe@thomsonreuters.com

Tripp Baltz,BNA abaltz@bna.com

"Stevens, Clark" ---09/26/2012 04:14:46 PM---Who at NYT? Can you send me a full list of who's writing? + Blake as well. Can you see who USGS has

From: "Stevens, Clark" (b) (6) @who.eop.gov>
To: Alisha Johnson/DC/USEPA/US@EPA
Cc: James O'Hara/DC/USEPA/US@EPA, "Kelly, Kate P" < Kate_Kelly@ios.doi.gov>, "Androff, Blake J" < Blake_Androff@ios.doi.gov>
Date: 09/26/2012 04:14 PM
Subject: RE: Heads Up

Who at NYT? Can you send me a full list of who's writing? + Blake as well. Can you see who USGS has heard from?

From: Alisha Johnson [mailto:Johnson.Alisha@epamail.epa.gov]

Sent: Wednesday, September 26, 2012 4:16 PM

To: Stevens, Clark

Cc: James O'Hara; Kelly, Kate P

Subject: RE: Heads Up

NY Times is now asking as well.

"Stevens, Clark" ---09/26/2012 04:06:06 PM---They've all asked today? From: Alisha Johnson [mailto:Johnson.Alisha@epamail.epa.gov]

From: "Stevens, Clark" (0) (6) @who.eop.gov>
To: Alisha Johnson/DC/USEPA/US@EPA
Cc: James O'Hara/DC/USEPA/US@EPA, "Kelly, Kate P" < Kate Kelly@ios.doi.gov>
Date: 09/26/2012 04:06 PM
Subject: RE: Heads Up

They've all asked today?

From: Alisha Johnson [mailto:Johnson.Alisha@epamail.epa.gov]

Sent: Wednesday, September 26, 2012 4:04 PM

To: Stevens, Clark

Cc: James O'Hara; Kelly, Kate P

Subject: RE: Heads Up

Reuters, Bloomberg, AP, BNA, Dow Jones, LA Times, MarketPlace and EnergyWire

"Stevens, Clark" ---09/26/2012 03:58:45 PM---And who are you guys sending to Alisha? From: Alisha Johnson [mailto:Johnson.Alisha@epamail.epa.gov]

From: "Stevens, Clark" (D) (6) @who.eop.gov>
To: Alisha Johnson/DC/USEPA/US@EPA
Cc: "Kelly, Kate P" <<u>Kate Kelly@ios.doi.gov</u>>, James O'Hara/DC/USEPA/US@EPA
Date: 09/26/2012 03:58 PM

Subject: RE: Heads Up

And who are you guys sending to Alisha?

From: Alisha Johnson [mailto:Johnson.Alisha@epamail.epa.gov]

Sent: Wednesday, September 26, 2012 4:00 PM

To: Stevens, Clark

Cc: Kelly, Kate P; James O'Hara

Subject: Heads Up

We're about to start sending our statement to those who have asked.